

CLAIMS

I claim:

1. A method for using a hardware I/O control  
5 block array by a parallel SCSI host adapter, said  
method comprising:

partitioning said hardware I/O control block  
array for said parallel SCSI host adapter into  
first and second pages;

10 using only said first page for non-Packetized  
SCSI Protocol hardware I/O control block storage;  
and

15 using said first and second pages for  
Packetized SCSI Protocol hardware I/O control  
block storage.

2. The method of Claim 1 wherein using said first  
and second pages for Packetized SCSI Protocol hardware  
I/O control block storage further comprises:

20 using said first page only when all available  
storage sites on said second page are used.

3. The method of Claim 1 further comprising:

25 maintaining a first page free site queue  
for said first page by a driver for said  
parallel SCSI host adapter.

4. The method of Claim 3 further comprising:

30 maintaining a second page free site  
queue for said second page by said driver for  
said parallel SCSI host adapter.

5. The method of Claim 1 further comprising:

35 maintaining a second page free site  
queue for said second page by a driver for  
said parallel SCSI host adapter.

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6. The method of Claim 1 further comprising:  
using a hardware I/O control block array  
pointer having a low byte and a high byte to  
address a storage site in said hardware I/O  
control block array.
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7. The method of Claim 6 further comprising:  
loading a tag from a reconnecting target into  
said low byte only.
- 10
8. The method of Claim 7 further comprising:  
loading said high byte with a zero value.
9. The method of Claim 6 further comprising:  
loading a tag from a reconnecting target into  
said low byte and said high byte.
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10. A system comprising:  
a parallel SCSI host adapter comprising;  
a sequencer; and  
a hardware I/O control block array  
pointer, coupled to said sequencer, having a  
low byte and a high byte; and  
a memory, coupled to said hardware I/O  
control block array pointer, including a hardware  
I/O control block array comprising:  
a plurality of pages including a first  
page and a second page,  
wherein said first page includes a  
plurality of hardware I/O control block  
storage sites equal to a number of  
unique tag values that can be returned  
by a non-Packetized SCSI Protocol tagged  
queue target reconnecting to said  
parallel SCSI host adapter; and
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said second page includes another plurality of hardware I/O control block storage sites.

5        11. The system of Claim 10 wherein said memory is external to said parallel SCSI host adapter.

10        12. The system of Claim 10 wherein said memory is internal to said parallel SCSI host adapter.

15        13. The system of Claim 10 further comprising:  
            a driver coupled to said parallel SCSI host adapter, wherein said driver allocates and de-allocates storage sites in said hardware I/O control block array.

20        14. The system of Claim 13 wherein said driver allocates sites for non-Packetized SCSI hardware I/O control blocks only in said first page.

25        15. The system of Claim 13 wherein said driver allocates sites for Packetized SCSI hardware I/O control blocks in said first page and in said second page.

30        16. The system of Claim 15 wherein said driver allocates sites for Packetized SCSI hardware I/O control blocks in said first page only when all available sites in said second page are used.

35        17. The system of Claim 13 further comprising:  
            a first page free site queue coupled to said driver.

35        18. The system of Claim 17 further comprising:

a second page free site queue coupled to said driver.

19. The system of Claim 13 further comprising:  
5 a second page free site queue coupled to said driver.

20. A method for using a hardware I/O control block array by a parallel SCSI host adapter, said  
10 method comprising:

partitioning said hardware I/O control block array for said parallel SCSI host adapter into first and second pages; and

15 using only said first page for non-Packetized SCSI Protocol hardware I/O control block storage;

using said first and second pages for Packetized SCSI Protocol hardware I/O control block storage;

20 maintaining a first page free site queue for said first page by a driver for said parallel SCSI host adapter;

maintaining a second page free site queue for said second page by said driver for said parallel SCSI host adapter;

25 using a hardware I/O control block array pointer having a low byte and a high byte to address a storage site in said hardware I/O control block array; and

30 loading a tag from a reconnecting target into said hardware I/O control block array pointer.